

Title (en)

Entrained air measurement apparatus

Title (de)

Vorrichtung zum Nachweis von Luftblasen

Title (fr)

Appareil de détection de l'air entraîné dans une solution

Publication

EP 0598667 B1 20000712 (EN)

Application

EP 93420419 A 19931027

Priority

US 97909292 A 19921119

Abstract (en)

[origin: EP0598667A2] A probe 10 and method for measuring a gaseous material, such as air, entrained in a solution (S) has a protective sheath member 14 having an ultrasonic transducer 18 encased therein and a reflecting member 42 spatially separated from the active area of face 20 of transducer 18. Upon activation of transducer 18, ultrasonic waves are emitted from transducer 18 that reflect off the gaseous material in the form of bubbles 48 and reflecting member 42 thereby producing correspondingly associated backscattered signals therefrom. Accordingly, the backscattered measurement is operative at low entrained air levels when only a few bubbles or gas 48 are present. Scattering from reflecting member 42 is useful at higher entrained air levels, approaching foam. <IMAGE>

IPC 1-7

G01N 29/02; **G01N 29/24**

IPC 8 full level

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CPC (source: EP US)

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Citation (examination)

- US 3974683 A 19760817 - MARTIN ROGER
- US 3283562 A 19661108 - HEISIG CHARLES G, et al

Cited by

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Designated contracting state (EPC)

BE DE FR GB

DOCDB simple family (publication)

EP 0598667 A2 19940525; **EP 0598667 A3 19951220**; **EP 0598667 B1 20000712**; CA 2104894 A1 19940520; DE 69329008 D1 20000817; DE 69329008 T2 20010322; JP H06213873 A 19940805; US 5454255 A 19951003

DOCDB simple family (application)

EP 93420419 A 19931027; CA 2104894 A 19930826; DE 69329008 T 19931027; JP 28893493 A 19931118; US 27768994 A 19940720